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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,352	11/19/2001	Norman R. Pallas	39-21 (51844)F MTC 6801	8761

321 7590 04/11/2005

SENNIGER POWERS LEAVITT AND ROEDEL  
ONE METROPOLITAN SQUARE  
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ST LOUIS, MO 63102

EXAMINER

CLARDY, S

ART UNIT PAPER NUMBER

1617

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/988,352

Applicant(s)

PALLAS ET AL.

Examiner

S. Mark Clardy

Art Unit

1617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4, 7-34, 37-44, 46-80 and 126-129 is/are pending in the application.
- 4a) Of the above claim(s) 27, 64 and 80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-26, 28-34, 37-44, 46-63 and 65-79 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1617

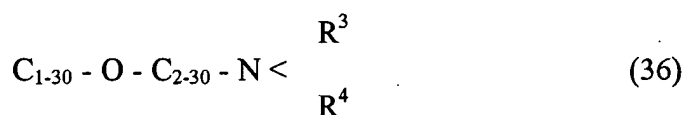
Claims 1-4, 7-34, 37-44, 46-80, and 126-129 are pending in this application which is a continuation-in-part of SN 09/926,521, which was filed under 35 USC 371 as the national stage application of PCT/US01/16550, filed May 21, 2001, which claims the benefit under 35 USC 119(e) of US Provisional Applications No. 60/206,628 (May 24, 2000), 60/205,524 (May 19, 2000), 60/273,234 (March 2, 2001), and 60/274,368 (March 8, 2001).

Applicants' claims are drawn to aqueous pesticidal microemulsion compositions comprising a water soluble pesticide, surfactant, and a compound which affects cell membrane permeability. There are two groups of aqueous compositions comprising a water soluble pesticide, surfactant system, and a stabilizer which is:

1. Alkylamine or quaternary ammonium salts thereof selected from: Dimethylcocoamine, hexylamine, dimethylhexylamine, octylamine, dimethyloctylamine, dodecyltrimethylamide, C<sub>4-8</sub> trialkylamines (independent claims 1 and 31).

2. alkyl or aryl amine having not more than 10 EO units in a cationic surfactant:stabilizer ratio of 1.5:1 to about 6:1 (independent claims 41 and 65).

Applicants' elected species comprises the herbicide glyphosate as the pesticidal agent, and the cationic alkyletheramine surfactant for formula 36:



wherein R<sup>3</sup> and R<sup>4</sup> are H, C<sub>1-30</sub>, or -(C<sub>2-4</sub>-O)<sub>1-50</sub> - H/C<sub>1-4</sub>.

No specific stabilizer compound was elected, thus the stabilizer compounds in groups 1 or 2 above are taken as an obvious variants for all stabilizers. Octylamine appears to be the preferred stabilizer (see claims 126-129).

Art Unit: 1617

Claims 1-4, 7-26, 28-34, 37-44, 46-63, 65-79, 126-129 have now been examined only insofar as they read on the elected species. Claims 27, 64, and 80 have been withdrawn from consideration as being drawn to non-elected species.

Again, upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The rejection under 35 USC 112 is withdrawn in response to applicants' amendment.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7-26, 28-34, 37-44, 46-63, 65-79, and 126-129 are again rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Jimoh (US 6,369,001), Wright et al (US 5,750,468), Maier et al (US 6,667,276), and Okano et al (US 6,030,923).

Jimoh, again, teaches microemulsion herbicidal compositions comprising a water soluble herbicide, an oil soluble graminicide (cyclohexenone or aryloxyphenoxypropionate), a water immiscible organic solvent, an emulsifying system comprising a tertiary amine surfactant, a nonionic dispersant, and an optional chloride stabilizer (abstract). Advantages of microemulsions include their ability to remain homogeneous without agitation for long periods of time; thus they may be handled much like a simple aqueous solution (col 4, lines 33-40). The

Art Unit: 1617

water soluble herbicide is preferably a salt of glyphosate, with the potassium salt being one of those disclosed (col 3, lines 20-34; col 9, lines 41-56); the examples use the IPA (isopropylamine) or MEA (monoethanolamine) salts. Several conventional organic solvents are disclosed in column 8. The tertiary amine surfactants are disclosed as also having the ability to enhance the herbicidal effectiveness of the glyphosate composition (col 10, lines 24-33). The tertiary amines are preferably selected from polyoxyethylene (2-20) tertiary alkylamines and alkyletheramines, with illustrative alkyletheramines being those disclosed in Wright et al, discussed next (col 10, lines 53-66). The compositions may further comprise a stabilizing chloride component which, in addition to HCL, alkali metal chlorides, and ammonium chloride, may be low molecular weight organic ammonium chlorides and quaternary ammonium chloride surfactants (abstract; column 11, lines 25+); exemplified stabilizers are benzalkonium chloride and ammonium chloride. Applicants argue that the formulations were not reported as having – 10C stability; however, failure to report a particular characteristic of the composition does not change the fact that the composition was made. Applicants also argue that the water immiscible organic solvent of Jimoh is not present for low temperature stability; however, it is not seen how that is relevant to the fact that this component is nevertheless present.

Maier et al, again, teach liquid compositions such as microemulsions comprising water soluble active agents such as glyphosate in combination with organic solvents and a surfactant system comprising acidic phosphoric esters and basic cosurfactants (abstract) such as N-alkylamines including hexylamine and n-octylamine (col 4, lines 19-25). A microemulsion glyphosate/octylamine composition is provided as example XI (Table 2).

Art Unit: 1617

Wright et al, again, teach glyphosate salt compositions comprising alkyletheramines, alkylether ammonium salts, or alkyletheramine oxides (abstract). The glyphosate salt may be any of the conventional salts including the potassium salt (col 5, lines 1-16). The tertiary alkyletheramine surfactants encompass those claimed herein; see col 6, lines 11-28.

Okano et al, again, teach liquid agricultural compositions comprising a water soluble active agent, a cationic surfactant, and an acid salt of an amine (abstract). Inventive products 1, 2, and 3 in Table 1 describe transparent compositions comprising glyphosate in combination with polyethoxylated ammonium chloride surfactants and octylamine hydrochloride and dimethyldecylamine hydrochloride.

While neither Wright et al or Okano et al address the formation of microemulsions, they disclose that applicants' components were known formulation agents for glyphosate compositions.

Again, one of ordinary skill in the art would be motivated to combine these references because the tertiary alkyletheramines of Wright et al are explicitly disclosed in Jimoh as being included in the tertiary amine surfactants contemplated therein for stabilizing the microemulsion compositions. Maier et al and Okano et al each disclose the utility of formulating water soluble agriculturally active agents such as glyphosate with amine and/or quaternary ammonium surfactants to improve the stability of multiphase formulations as taught in Jimoh.

Thus, again, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have combined the potassium salt of glyphosate, an organic solvent, and a polyalkoxylated alkyletheramine surfactant because each of these components are disclosed in the microemulsion compositions of Jimoh, which further contain an additional oil

Art Unit: 1617

soluble herbicide. Okano et al and Maier further disclose the stability enhancing effect of adding alkylamines or alkylamine hydrochlorides to liquid agricultural compositions comprising active agents such as glyphosate and cationic surfactants. Determination of appropriate weight ratios of components is within the skill level of the ordinary artisan.

It cannot be determined whether any of the data in the specification demonstrates unexpected results for the elected species.

It is also noted that in applicants' response, that "microemulsion formation and stability is unpredictably affected by the surfactant system employed and the presence of components such as oil-soluble herbicides, anionic surfactants, and nonionic surfactants. Although the formation of microemulsions is obtainable using certain surfactant combinations and finite concentrations of these combinations, formulating herbicide microemulsions is an unpredictable art." (p. 52, B: The State of Microemulsion Art). In view of the extensive variations presented in the instant claims, the following rejection must be made.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4, 7-26, 28-34, 37-44, 46-63, 65-79, and 126-129 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In view of the unpredictability of the microemulsion formulation art, as noted by applicants, and further in view of the extensive variations permitted in the claims for the

Art Unit: 1617

component constituents of the microemulsion compositions as claimed here, it is not seen how applicants have enabled one skilled in the art to select from the recited components herein those which will, in fact, form microemulsions.

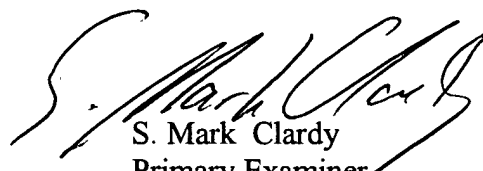
No unobvious or unexpected results are noted; no claim is allowed. No comparisons with the closest prior art are noted (presumably Jimoh, and the benzalkonium chloride or ammonium chloride stabilizers therein).

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103c and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is 571-272-0611. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
S. Mark Clardy  
Primary Examiner  
Art Unit 1617

April 6, 2005